



ATSC4 INTEGRATOR'S MANUAL



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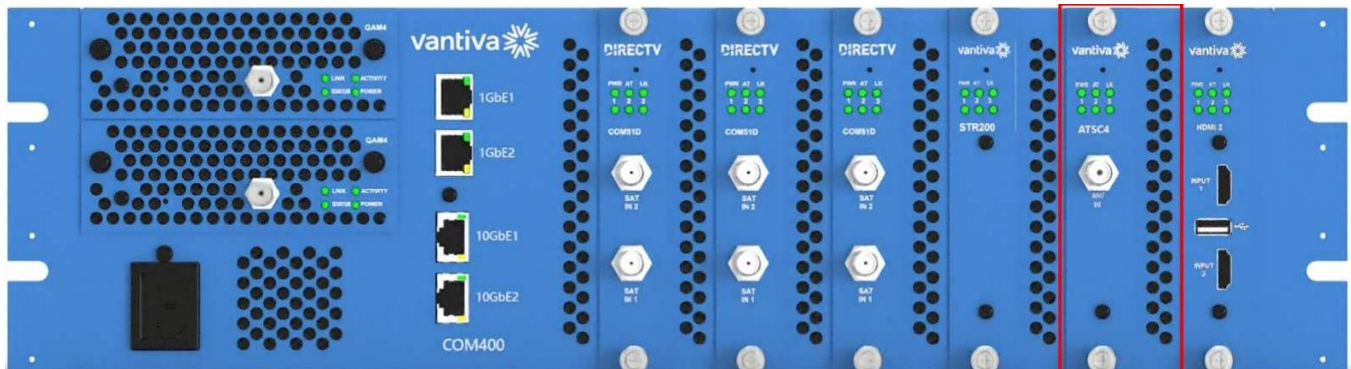
1 INTRODUCTION

- ATSC4 is a “blade” style product that is intended to work within a Vantiva COM3000 environment. The ATSC4 is a device for receiving off-air, local ATSC broadcast channels or local QAM (J.83 Annex B) input and converting those signals to IP (MPEG2 transport) for processing by the COM400 and eventual output in a commercial (multi-client or endpoint) deployment.
- The ATSC4 will work with the COM400 or COM421 chassis like the COM51 satellite tuner card.
- The ATSC4 is capable of handling four simultaneous off-air frequencies.
- Each of the four tuners has the capability to tune up to ten programs from one RF carrier.
- The ATSC4 card can tune to four different simultaneous frequencies using terrestrial modulations: ATSC 1.0, QAM (J.83B), DVB-T, DVB-T2, or ISDB-T. ATSC 3.0 is not currently supported.

2 INSTALLATION

2.1 ATSC4 INSTALLATION

The ATSC4 card inserts into the COM400 or COM421 chassis like a COM51 card.



2.2 IP ADDRESS

Like the COM51D, the ATSC4 card's default IP address is $192.168.3.(chassisId*16+slot+1)$. The IP address can be changed manually. The ATSC4 card also receives a DHCP IP address. The COM51 Pairing Info screen will discover the ATSC4 and provide a hyperlink to the interface. (COM51 software version 02.04.47 or higher)

2.3 SIGNAL ACQUISITION

When planning an installation, it is important to know the location of the property in relation to the transmission tower(s). There are multiple websites dedicated to mapping an address and listing available off-air channels. The recommended practice is to use an enterprise-grade antenna recommended for the geographic location and mounted on the roof of the property. Use care when combining two or more antennas. Consult your antenna vendor or distributor.

The antenna(s) should be peaked for maximum signal level and SNR using an RF meter capable of measuring an 8VSB signal.

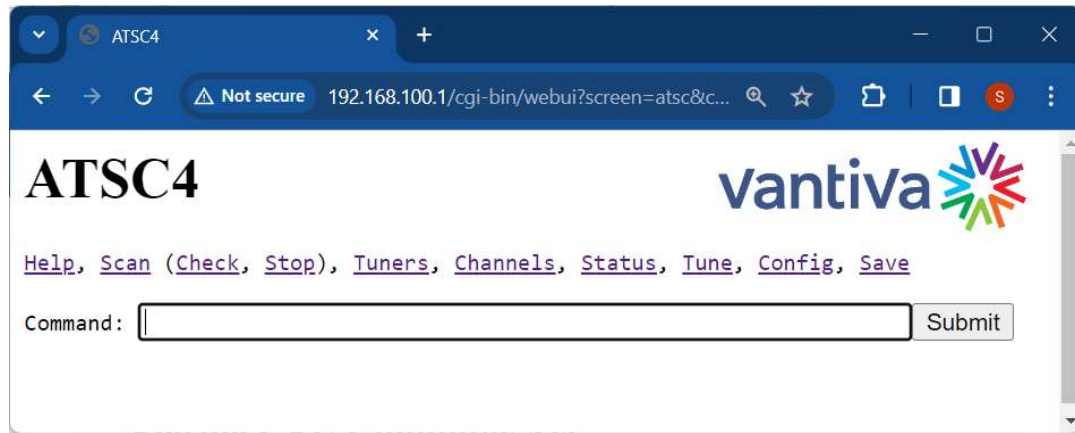
Note to System Installer

This reminder is provided to call the system installer's attention to Section 820-93 of the National Electrical Code, which provides guidelines for proper grounding and specifies that the coaxial cable shield shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Safety Warning

Antennas should be installed by qualified installation technicians using proper personal protective equipment (PPE). **Read all safety instructions provided with the antenna.**

3 SETUP AND CONFIGURATION



The Web UI can be accessed at the card's IP address. The Web UI provides links to perform the most common actions:

- "Help" will show the most common commands.
- "Scan" can scan through all the frequencies to find channels.
- "Check" will check the status of a scan.
- "Stop" will stop the channel scan.
- "Tuners" will show the frequencies and signal strength for the four tuners.
- "Channels" will show all channels discovered.
- "Status" will show the status of all filters outputting IP video.
- "Tune" will configure a filter for a discovered channel and output it to a port.
- "Config" can configure the card's IP address.
- "Save" will save the current state to flash.

3.1 SOFTWARE UPDATE

The current ATSC4 software is available on the Vantiva website:

<https://www.vantiva.com/video-multi-client-solutions-documentation-library/>

1. Download the software to a folder on a PC connected to the COM chassis.
2. Log into the ATSC4 and navigate to the Upload tab.
3. Using the Choose File option, select the software file from the location on the PC.
4. Click Upload.
5. The ATSC4 will reboot during the upload process. Wait about 3–5 minutes for the upload to complete.

ATSC4



[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

ATSC4_DT01.00.03.bin

The software version can be verified using Config > Get > Info.

ATSC4



[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

get ▾

info ▾

\$ get info

ATSC4 Version: 01.00.03; Oct 18 2024 18:54:22

Chassis 1; Slot 2; HwId 2; BoardId 0

MAC EC:93:7D:E0:14:89

3.2 SCAN PAGE

ATSC4



[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

Modulation= Start= End= Clear=

The Scan page is the default landing page when logging into the ATSC4 and permits scanning for channels. User controls include:

- Modulation type (ATSC 1.0, QAM J.83B, DVB-T, DVB-T2, ISDB-T)
- Start and end RF channels for the scan. Setting these to the lowest and highest RF channels will reduce scan time but is not required.

If the modulation type is set to "AUTO", each modulation type will be tried until a tuner lock is acquired. It is recommended to set the modulation type to ATSC 1.0 in the United States.

The Check and Stop functions allow the user to check scan progress and stop a scan when preferred. Once the scan is complete, available channels are listed in the Channels tab.

Reminder: After completing a scan and confirming the channel list, save the current configuration to flash so the discovered channels are retained after reboot.

NOTE: The scan may capture ATSC 3.0 channels where available. ATSC 3.0 is not currently supported.

During a scan, click Check to see the current progress:

When complete, selecting Check will display that the scan is complete and show the number of channels found:

```
$ get scan
Done.  85 channels
```

3.3 CHANNELS

The Channels tab will display all scanned channels.

Included information:

- Modulation type
- Off-air RF channel and program number
- Channel identification (Call sign)
- PSIP major and minor channel
- Signal strength and SNR

\$ get channels

mod	freq.prog	name	major.minor	strength	snr
ATSC	7.3	WHMB-HD	40.1	-46	34
ATSC	7.4	CHSN	40.2	-46	34
ATSC	7.5	QVC	40.3	-46	34
ATSC	7.6	HSN	40.4	-46	34
ATSC	7.7	QVC2	40.5	-46	34
ATSC	7.8	CHSN+	40.6	-46	34
ATSC	8.3	WIIH-LD	17.1	-71	19
ATSC	9.3	WISH-HD	8.1	-46	31
ATSC	9.4	getTV	8.2	-46	31
ATSC	9.5	Radar	8.3	-46	31
ATSC	9.6	My_INDY	23.1	-46	31
ATSC	9.7	RADAR	23.2	-46	31
ATSC	9.8	WISHNET	23.3	-46	31
ATSC	9.9	DIYA	8.4	-46	31
ATSC	13.1	WTHR-HD	13.1	-45	33
ATSC	13.2	Dab1	13.2	-45	33
ATSC	13.3	Me-TV	13.3	-45	33
ATSC	13.4	Crime	13.4	-45	33
ATSC	13.5	Quest	13.5	-45	33
ATSC	13.6	NEST	13.6	-45	33
ATSC	17.1	WALV-CD	46.1	-53	34
ATSC	17.2	CRIME	46.2	-53	34
ATSC	17.3	ShopLC	46.3	-53	34

ATSC	17.4	NOSEY	46.4	-53	34
ATSC	17.5	CONFESS	46.5	-53	34
ATSC	17.6	HEROES	46.6	-53	34
ATSC	17.7	WTHR-HD	13.13	-53	34
ATSC	20.2	WSWY-LD	21.1	-66	26
ATSC	20.4	RTV	21.2	-66	26
ATSC	20.6	REVN	21.3	-66	26
ATSC	20.8	Action	21.4	-66	26
ATSC	20.10	Family	21.5	-66	26
ATSC	20.12	Revival	21.6	-66	26
ATSC	20.14	GLTVii	21.7	-66	26
ATSC	21.3	WFYI-1	20.1	-51	33
ATSC	21.4	WFYI-2	20.2	-51	33
ATSC	21.5	WFYI-3	20.3	-51	33
ATSC	22.3	WXIN-DT	59.1	-54	33
ATSC	22.4	AntTV__	59.2	-54	33
ATSC	22.5	Rewind_	59.3	-54	33
ATSC	22.6	Charge!	59.4	-54	33
ATSC	22.7	WTTK-DT	29.1	-54	33
ATSC	23.1	WDTI-DT	69.1	-59	32
ATSC	23.2	WDTI-ES	69.2	-59	32
ATSC	23.3	WDTI-SD	69.3	-59	32
ATSC	24.1001	WUDZ-LD	28.1	-60	30
ATSC	24.1002	WUDZ-LD	28.2	-60	30
ATSC	24.1003	WUDZ-LD	28.3	-60	30
ATSC	24.1004	WUDZ-LD	28.4	-60	30

3.4 Signal Strength and SNR

In Vantiva lab testing, the ATSC4 will start to show consistent CC errors (dropped packets) at -78 dBm with an SNR of 15. However, this is well below the threshold of an adequate signal. It is recommended that signal inputs be

-60 dBm to -33 dBm with an SNR of 25 or greater. (-10 / +15 dBmV)

3.5 Tune Page



The Tune page is used to select which off-air programs will be output to a specific IP address.

The Tune page uses tuner filters to define how scanned RF carriers and their programs are routed to IP outputs.

- An RF carrier is the physical broadcast channel received from the antenna or QAM input.
- A tuner selects one RF carrier. The ATSC4 has four tuners, so it can receive up to four RF carriers at the same time.
- A tuner filter defines what will be output from that RF carrier. Each tuner filter is assigned to one tuner and one RF carrier.
- Each RF carrier can contain multiple programs, such as 7.3, 7.4, and 7.5. A tuner filter can output all programs from the carrier or selected individual programs.
- Each output is sent to a destination IP address and port, such as a QAM4 port, multicast address, or third-party destination.
- Tuner and channel filter settings must correspond to the same RF frequency so the selected programs are routed correctly.

In practice, first choose the RF carrier that a tuner will receive, then decide whether to send the entire carrier or individual programs from that carrier. The examples below show both approaches.

The Tune page displays the filter setup section and the channel list, as shown below:

```
$ get status
```

tuner.filter	mod	freq.prog	ip:port	name	major.minor	PIDs	packets	bitrate	errors	strength	snr
--------------	-----	-----------	---------	------	-------------	------	---------	---------	--------	----------	-----

```
$ get channels
```

mod	freq.prog	name	major.minor	strength	snr
ATSC	7.3	WHMB-HD	40.1	-46	34
ATSC	7.4	CHSN	40.2	-46	34
ATSC	7.5	QVC	40.3	-46	34
ATSC	7.6	HSN	40.4	-46	34
ATSC	7.7	QVC2	40.5	-46	34
ATSC	7.8	CHSN+	40.6	-46	34
ATSC	8.3	WIIH-LD	17.1	-71	19
ATSC	9.3	WISH-HD	8.1	-46	31
ATSC	9.4	getTV	8.2	-46	31
ATSC	9.5	Radar	8.3	-46	31

3.6 Tuner Filter Options

The tuner filter can be set up using two options:

1. Stream out all programs on an RF carrier to the QAM.

Using this option will result in:

- All programming from the 8VSB signal will be modulated on the selected QAM carrier.
- Use the QAM port base.
- PSIP information will be passed through the QAM to the end device. The TV will display the channels on the PSIP channel from the broadcaster.
 - PSIP program information will be displayed on screen.
 - Programs cannot be mapped via the COM51D EPG.

2. Select individual programs and stream them to a specific QAM4 IP address and port.

Using this option will stream each program to a specific QAM4 IP address and port.

- This will allow the COM51D EPG to assign PSIP channel mapping to each program.
- OTA PSIP program information and channel mapping will not pass through the COM system.

3.7 Tuner Filter Setup

Select the tuner and filter number from the drop-down boxes. The first tuner and filter are listed as 0.

Select the program from the drop-down menu and input the destination IP address and port. The destination IP address can be the QAM4 IP address and port number, a multicast IP address, or a third-party IP address and port.

Reminder: After configuring tuner filters and destination IP addresses or ports, save the current configuration to flash so the routing settings are retained after reboot.

ATSC4 

[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

Tuner= Filter= Channel= IP:port=

\$ get status

tuner.filter	mod	freq.prog	ip	PIDs	packets	bitrate
0.0 0.0						
0.0 0.0						
7.0 0.0						
7.3 40.1						
7.4 40.2						
7.5 40.3						
9.0 0.0						
9.3 8.1						
9.4 8.2						
9.5 8.3						
9.6 23.1						
9.7 23.2						
9.8 23.3						
13.0 0.0						
13.1 13.1						
13.2 13.2						
13.3 13.3						
13.4 13.4						
13.5 13.5						
13.6 13.6						

\$ get channels

mod	freq.prog	name	major.
ATSC	7.3	WHMB-HD	40.1
ATSC	7.4	QVC	40.2
ATSC	7.5	HSN	40.3
ATSC	9.3	WISH-HD	8.1
ATSC	9.4	getTV	8.2
ATSC	9.5	Radar	8.3
ATSC	9.6	My_INDY	23.1
ATSC	9.7	BOUNCE	23.2
ATSC	9.8	WISHNET	23.3

In the example below, tuner 0, filter 0 is set to send all programming from RF channel 7 to QAM4 port 16. The QAM4 receives this as a single stream and will report bitrate only on the first QAM program. The TV will map the channels to the channel assigned by the broadcaster.

ATSC4 

[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

Tuner= Filter= Channel= IP:port=

\$ get status

tuner.filter	mod	freq.prog	ip:port	name	major.minor	PIDs	packets	bitrate	errors	strength	snr
0.0	ATSC	7.0	192.168.6.2:16	NA	0.0	0x0-0x1ffe	38920	19991168	0	-46	34

The COM51D QAM tab will display as follows:

EdgeQAM Modulator

Which EdgeQam (192.168.6.1+chassis):

Mega-Bits Per Second

Port = QamChannel * 16 + QamSubChannel

	PortBase	Chan	-1	-2	-3	-4	total
Qam1	16	23	19.0	0.0	0.0	0.0	19.0

Note that the bitrate on the ATSC4 approximately matches the QAM4 bitrate.

In the example below, individual tuner filters will be set for each program on an ATSC 1.0 carrier.

- Tuner 0 filter 0 is streaming RF channel 7.3 to QAM4 port 17.
- Tuner 0 filter 1 is streaming RF channel 7.4 to QAM4 port 18.
- Tuner 0 filter 2 is streaming RF channel 7.5 to QAM4 port 19.

\$ get status

tuner.filter	mod	freq.prog	ip:port	name	major.minor	PIDs	packets	bitrate	errors	strength	snr
0.0	ATSC	7.3	192.168.6.2:17	WHMB-HD	40.1	0x0,0x30-0x31,0x34	192337	5885152	0	-46	34
0.1	ATSC	7.4	192.168.6.2:18	CHSN	40.2	0x0,0x40-0x41,0x44	96453	5921248	0	-46	34
0.3	ATSC	7.5	192.168.6.2:19	QVC	40.3	0x0,0x50-0x51,0x54	3649	3008000	0	-46	34

\$ get channels

Port = QamChannel * 16 + QamSubChannel

	PortBase	Chan	-1	-2	-3	-4	total
Qam1	16	23	6.8	5.5	2.6	0.0	14.8

The QAM4 now displays bitrate on ports 17-19.

Bitrates displayed for each stream approximately match.

3.8 COM51 EPG Entry

The ATSC4 card will create a basic EPG entry to be copied, pasted, and edited in the COM51 EPG tab. To access the text, click the Tune List tab.

The EPG entry will be displayed below the tune list.

[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [Tunelist](#), [Config](#), [Save](#), [Upload](#)

```
tuner.filter mod freq.prog ip:port
tuner.filter mod freq.prog qamMajor-qamMinor
0.0 ATSC 7.3 192.168.6.2:17
0.1 ATSC 7.4 192.168.6.2:18
0.2 ATSC 7.5 192.168.6.2:19
0.3 ATSC 7.6 192.168.6.2:20
0.4 ATSC 7.7 192.168.6.2:21
0.5 ATSC 7.8 192.168.6.2:22
1.0 ATSC 9.3 192.168.6.2:33
1.1 ATSC 9.4 192.168.6.2:34
1.2 ATSC 9.5 192.168.6.2:35
1.3 ATSC 9.6 192.168.6.2:36
1.4 ATSC 9.7 192.168.6.2:37
1.5 ATSC 9.8 192.168.6.2:38
1.6 ATSC 9.9 192.168.6.2:39
2.0 ATSC 13.1 192.168.6.2:49
2.1 ATSC 13.2 192.168.6.2:50
2.2 ATSC 13.3 192.168.6.2:51
2.3 ATSC 13.4 192.168.6.2:52
2.4 ATSC 13.6 192.168.6.2:53
3.0 ATSC 14.3 192.168.6.2:65
3.1 ATSC 14.4 192.168.6.2:66
```

Submit Add

```
EPG entries:
40-1 NtHMB-HD_info 1 17
40-2 NCHSN_info 1 18
40-3 NQVC_info 1 19
40-4 NHSN_info 1 20
40-5 NQVC2_info 1 21
40-6 NCHSN+_info 1 22
8-1 NtISH-HD_info 1 33
8-2 NgetTV_info 1 34
8-3 NConfess_info 1 35
23-1 NMy_INDY_info 1 36
23-2 NNosey_info 1 37
23-3 NtISHNET_info 1 38
8-4 NDIYA_info 1 39
13-1 NtTHR-HD_info 1 49
13-2 NQUEST_info 1 50
13-3 NMe-TV_info 1 51
13-4 NCrime_info 1 52
13-6 NNEST_info 1 53
51-1 NDABL_info 1 65
51-2 NTOONS_info 1 66
51-3 NNEST_info 1 67
51-12 NEMLW_info 1 68
```

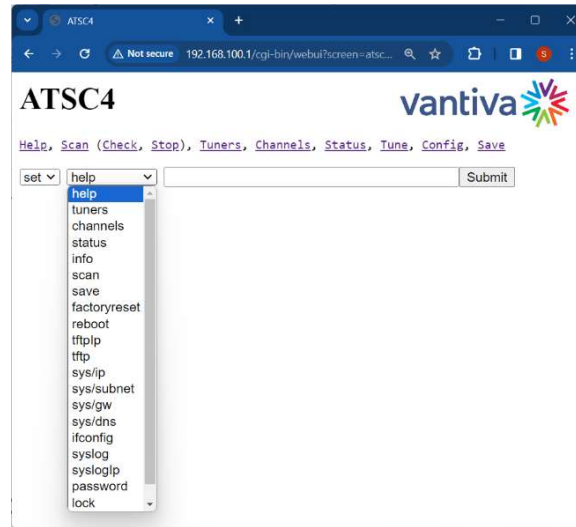
If an ATSC channel matches a channel from DIRECTV, then the COM51 EPG can be configured like a normal DIRECTV channel. The only difference is that the video is coming from the ATSC4 card instead of a COM51 card.

For ATSC channels that do not match a DIRECTV channel, COM51 EPG text is standard for any external source. In the example below, three channels from the ATSC4 are mapped to channels 2-4.

```
The format is displayNumber-minor majorNumber-minorNumber-[hd|sd] qamChassis port
OR displayNumber-minor majorNumber-minorNumber-[hd|sd] multicastIP port
OR displayNumber-minor majorNumber-minorNumber-[hd|sd] -qamCarrier program
OR displayNumber-minor NMyChan_Event_info qamChassis port
The chassis and port are used for PSIP guide generation. Set to -1 to disable.
```

```
2-0 Nlocal_WHMB 1 17
3-0 Nlocal_QVC 1 18
4-0 Nlocal_HSN 1 19
```

3.9 Config Page



The Config page allows simple card configuration changes:

Reminder: After making changes on the Config page, save the current configuration to flash. Some changes, such as IP settings, may also require a reboot before they take effect.

- IP address
- Subnet mask
- Gateway
- TFTP server IP address
- TFTP filename (for software updates)
- Reboot

3.10 Save Your Changes

The user must explicitly save their changes to flash. No changes are persistent until they are saved to flash.

ATSC4

vantiva 

[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

Command:

\$ set save

Submit

3.11 ATSC4 Config

The ATSC4 Config section has options for setting functions and getting information about the ATSC4.
Reminder: After using a Set function in ATSC4 Config, save the current configuration to flash when the change should persist after reboot.

get ▼

help ▼

\$ get s

tuner.

0.0

0.1

0.2

1.0

help

help

tuners

channels

status

info

scan

save

factoryreset

reboot

tftpip

tftp

sys/ip

sys/subnet

sys/gw

sys/dns

ifconfig

syslog

sysloglp

password

lock

fre

7.3

7.4

7.5

13.:

get info View software version Chassis/slot info MAC address	get help Submit \$ get info ATSC4 Version: 01.00.03; Oct 18 2024 18:54:22 Chassis 1; Slot 2; HwId 2; BoardId 0 MAC EC:93:7D:E0:14:89
get ifconfig	\$ get ifconfig <pre> eth0 Link encap:Ethernet HWaddr 40:0F:C1:68:87:50 inet addr:192.168.3.129 Bcast:192.168.255.255 Mask:255.255.0.0 UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:9513 errors:0 dropped:1056 overruns:0 frame:0 TX packets:6440932 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:1619254 (1.5 MiB) TX bytes:8745201275 (8.1 GiB) eth0:2 Link encap:Ethernet HWaddr 40:0F:C1:68:87:50 inet addr:192.168.3.21 Bcast:192.168.255.255 Mask:255.255.0.0 UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 UP LOOPBACK RUNNING MTU:65536 Metric:1 RX packets:9189176 errors:0 dropped:0 overruns:0 frame:0 TX packets:9189176 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:11882351599 (11.0 GiB) TX bytes:11882351599 (11.0 GiB) default via 192.168.0.1 dev eth0 127.0.0.0/8 dev lo scope link 192.168.0.0/16 dev eth0 scope link src 192.168.3.21 Kernel IP routing table Destination Gateway Genmask Flags Metric Ref Use Iface default 192.168.0.1 0.0.0.0 UG 0 0 0 eth0 127.0.0.0 * 255.0.0.0 U 0 0 0 lo 192.168.0.0 * 255.255.0.0 U 0 0 0 eth0 </pre>

get syslog	<pre>\$ get syslog Jan 1 01:41:35 192 user.warn app: Channel(0, 7.5, NA, 0.0, 1) Jan 1 01:41:35 192 user.warn app: VCT CRC error Jan 1 01:41:35 192 user.warn app: Channel(0, 7.3, WHMB-HD, 40.1, 2) Jan 1 01:41:35 192 user.warn app: Channel(0, 7.4, QVC, 40.2, 2) Jan 1 01:41:35 192 user.warn app: Channel(0, 7.5, HSN, 40.3, 2) Jan 1 01:41:35 192 user.warn app: VCT CRC error Jan 1 01:41:36 192 user.warn app: VCT CRC error Jan 1 01:41:36 192 user.warn app: VCT CRC error Jan 1 01:41:37 192 user.warn app: Tune(0, 1, 8) Jan 1 01:41:39 192 user.warn app: Tune(0, 1, 9) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.3, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.4, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.5, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.6, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.7, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.8, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.9, NA, 0.0, 1) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.3, WISH-HD, 8.1, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.4, getTV, 8.2, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.5, Radar, 8.3, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.6, My_INDY, 23.1, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.7, BOUNCE, 23.2, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.8, WISHNET, 23.3, 2) Jan 1 01:41:39 192 user.warn app: Channel(0, 9.9, DIYA, 8.4, 2)</pre>
Set factory reset Clears all information and settings	set ▼ factoryreset ▼ Submit
Set static IP information	set ▼ sys/ip ▼ Submit set ▼ sys/subnet ▼ Submit set ▼ sys/gw ▼ Submit set ▼ sys/dns ▼ Submit Save changes Reboot is required for IP settings to take effect.
Set password	get ▼ password ▼ 123456 Submit <pre>\$ set password 123456</pre> Used with the commands "set lock" and "set unlock <password>".

3.12 Tune List

Like the COM51D “Tuneall” function, the tune list will save ATSC4 settings as a text file. This file can be saved and reapplied or edited.

Reminder: Saving the Tune List as a text file is useful for backup, but it does not replace saving the active ATSC4 configuration to flash.

It is recommended to save this file for future reference.

ATSC4



[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

```
tuner.filter mod freq.port ip:port  
tuner.filter mod freq.port qamMajor-qamMinor
```

```
0.0 ATSC 7.3 192.168.6.2:17  
0.1 ATSC 7.4 192.168.6.2:18  
0.2 ATSC 7.5 192.168.6.2:19
```

Submit

4 TROUBLESHOOTING

Use the following symptoms to identify the most likely cause and corrective action.

Symptom	Likely cause	Recommended action
Weak or inconsistent picture quality	Off-air signal level or SNR is too low.	Verify off-air signals with a signal level meter set to measure 8VSB. Re-peak the antenna based on the weakest signal being used. Signal levels greater than -65 dBm are typically needed for consistent picture quality.
A weak channel is unreliable on one tuner	Tuner 4 may have slightly more attenuation due to the ATSC4 signal path.	Avoid using tuner 4 for the weakest channel when possible.
Channels scan but video quality is questionable	The issue may be related to the antenna feed rather than ATSC4 configuration.	Connect the antenna feed directly to a TV, set up air channels, and run an auto scan. Compare picture quality to isolate the source of the issue.
Configured output does not appear at the expected destination	The destination IP address and port may be duplicated by another signal source.	Verify that the destination IP address and port are unique and are not being used by another source.

4.1 ERROR REPORTING

If the signal received by the ATSC4 drops below the threshold, it will report errors in the Tune and Channels displays.

These errors will continue to display even if the signal is restored to a satisfactory level. This feature is designed to aid in troubleshooting.

[Help](#), [Scan \(Check, Stop\)](#), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [Tunelist](#), [Config](#), [Save](#), [Upload](#)

Tuner= Filter= Channel= IP:port=

\$ get status

tuner.filter	mod	freq.prog	ip:port	name	major.minor	PIDs	packets	bitrate	errors	strength	snr
0.0	ATSC	7.3	192.168.6.2:17	WHMB-HD	40.1	0x0,0x30-0x31,0x34	8167638	4909056	59	-79	18
0.1	ATSC	7.4	192.168.6.2:18	CHSN	40.2	0x0,0x40-0x41,0x44	12183488	7241760	68	-79	18
0.3	ATSC	7.5	192.168.6.2:19	QVC	40.3	0x0,0x50-0x51,0x54	3541400	2256000	57	-79	18

\$ get channels

Once the signal issues have been resolved, the errors can be cleared from the Config tab. Select Set and Clear from the drop-down options, and then click Submit.

ATSC4



[Help](#), [Scan](#) ([Check](#), [Stop](#)), [Tuners](#), [Channels](#), [Status](#), [Tune](#), [TuneList](#), [Config](#), [Save](#), [Upload](#)

get ▾

help ▾

Submit

\$ set clear

If the signal is correct, the Tune tab will report no errors.

\$ get status

tuner.filter	mod	freq.prog	ip:port	name	major.minor	PIDs	packets	bitrate	errors	strength	snr
0.0	ATSC	7.3	192.168.6.2:17	WHMB-HD	40.1	0x0,0x30-0x31,0x34	9029743	5071488	0	-51	34
0.1	ATSC	7.4	192.168.6.2:18	CHSN	40.2	0x0,0x40-0x41,0x44	13364460	7482400	0	-51	34
0.3	ATSC	7.5	192.168.6.2:19	QVC	40.3	0x0,0x50-0x51,0x54	3916812	2171776	0	-51	34

\$ get channels